

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Subject: [4206] 1996 Contest Calendar  
Message-ID: <199602122343.XAA10147@chuck.dallas.sgi.com>

Gang,

Here is what I have for the calendar year of 1996. This is not for the purpose of stimulating contest operating for this group, but as a FYI type notice to note ahead of time what is going on for a lots of weekends. As we all know there are a lot of contests almost every weekend of the year. We, the QRP community, have our fair share too. Knowing that there is a really big contest can help us plan around them or join in depending upon our mood.

I know that this last Saturday there was a NA sprint and the 40M freqs from 7.025 to 7.065MHz part of the band until 2400Z was hopping with activity. So I just moved down the band and picked up some DX.

I may have left some stuff out inadvertantly, so let me know and I'll add it and I'll post this as we update it. You'll note that I used the right year this time. :-)

I'll update with the ARCI Contests as they firm up. You'll note that I did not put the fox schedule here. :-)

dit dit

-----cut here-----

1996

January							February							March						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
	1	2	3	4	5	6					1	2	3						1	2
7	8	9	10	11	12	13	4	5	6	7	8	9	10	3	4	5	6	7	8	9
14	15	16	17	18	19	20	11	12	13	14	15	16	17	10	11	12	13	14	15	16
21	22	23	24	25	26	27	18	19	20	21	22	23	24	17	18	19	20	21	22	23
28	29	30	31				25	26	27	28	29			24	25	26	27	28	29	30
														31						
April							May							June						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
	1	2	3	4	5	6					1	2	3	4						1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22

28 29 30	26 27 28 29 30 31	23 24 25 26 27 28 29 30
July	August	September
S M Tu W Th F S	S M Tu W Th F S	S M Tu W Th F S
1 2 3 4 5 6	1 2 3	1 2 3 4 5 6 7
7 8 9 10 11 12 13	4 5 6 7 8 9 10	8 9 10 11 12 13 14
14 15 16 17 18 19 20	11 12 13 14 15 16 17	15 16 17 18 19 20 21
21 22 23 24 25 26 27	18 19 20 21 22 23 24	22 23 24 25 26 27 28
28 29 30 31	25 26 27 28 29 30 31	29 30
October	November	December
S M Tu W Th F S	S M Tu W Th F S	S M Tu W Th F S
1 2 3 4 5	1 2	1 2 3 4 5 6 7
6 7 8 9 10 11 12	3 4 5 6 7 8 9	8 9 10 11 12 13 14
13 14 15 16 17 18 19	10 11 12 13 14 15 16	15 16 17 18 19 20 21
20 21 22 23 24 25 26	17 18 19 20 21 22 23	22 23 24 25 26 27 28
27 28 29 30 31	24 25 26 27 28 29 30	29 30 31

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Feb	15	Thursday	NE QRP Club 79 Colorburst Contest	0200Z-0300Z
Feb	17-18	Sat-Sun	ARRL CW DX Contest	
Feb	22	Thursday	NE QRP Club 79 Colorburst Contest	0200Z-0300Z
Feb	24-25	Sat-Sun	CQ WW SSB 160M Contest	
Feb	25	Sun	CQC Winter QSO Party	
Feb	29	Thursday	NE QRP Club 79 Colorburst Contest	0200Z-0300Z
March	2	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting	
March	2-3	Sat-Sun	ARRL SSB DX Contest	
March	3	Sunday	NorCal Meeting at Livermore	
March	7	Thursday	NE QRP Club 79 Colorburst Contest	0200Z-0300Z
March	14	Thursday	NE QRP Club 79 Colorburst Contest	0200Z-0300Z
March	21	Thursday	NE QRP Club 79 Colorburst Contest	0200Z-0300Z
March	28	Thursday	NE QRP Club 79 Colorburst Contest	0200Z-0300Z
March	30-31	Sat-Sun	CQ WW SSB WPX Contest	
March	30-31	Sat-Sun	G-QRP Somerset Contest	
April	6	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting	
April	7	Sunday	NorCal Meeting at Livermore	
April	13-14	Sat-Sun	ARCI Spring QSO Party	
April	27	Saturday	NorCal QRP to the Field Contest	
May	4	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting	

May	4-5	Sat-Sun	Ten Ten CW Contest
May	5	Sunday	NorCal Meeting at Livermore
May	16	Thursday	Four Days in May Meeting in Dayton
May	17-19	Fri-Sun	Dayton Hamvention
May	25-26	Sat-Sun	CQ WW CW WPX Contest
June	1	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting
June	2	Sunday	NorCal Meeting at Livermore
June	8-9	Sat-Sun	ARRL VHF QSO Party
June	22-23	Sat-Sun	ARRL Field Day
July	6	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting
July	13-14	Sat-Sun	CQ WW VHF Contest
Aug	3	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting
Aug	3-4	Sat-Sun	ARRL UHF Contest
Aug	3-4	Sat-Sun	Ten Ten Phone Contest
Sept	7	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting
Sept	14-15	Sat-Sun	ARRL VHF QSO Party
Sept	21	Sat	New England QRP Afield
Sept	28-29	Sat-Sun	CQ WW RTTY Contest
Oct	5	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting
Oct	26-27	Sat-Sun	CQ WW SSB DX Contest
Oct	26-27	Sat-Sun	Ten Ten CW Contest
Nov	2	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting
Nov	2-3	Sat-Sun	ARRL CW SS Contest
Nov	16-17	Sat-Sun	ARRL SSB SS Contest
Nov	23-24	Sat-Sun	CQ WW CW DX Contest
Dec	2	Saturday	MiQRP Breakfast Meeting NorTex Meeting, CQC Meeting, AZ Meeting
Dec	31	Tue	ARRL SKN

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Chuck Adams (K5FO CP-60) adams@sgi.com  
 Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996

From: George.Gingell@bbs.abs.net (George Gingell)  
Subject: [4173] 1996 QRP NET SCHEDULE  
Message-ID: <1996Feb12.111713.2171@abs.net>

QRP ARCI 1996 NET SCHEDULE

NET	QRG	NCS	DAY/HR	UTC
TCN *	14060	NCS-W5LXS ANCS-K2LGJ	SUNDAY	2300
TCN remains at 2300 UTC Sunday Night Year-round, Except on night of QRP Contest when it Meets at 2400 UTC				
SEN **	7030	NCS-K3TKS	+WEDNESDAY	0100
	3535	ANCS-AA10C		0130
(Always 8 P.M. on Tuesday Night EST/EDT)				
GSN	3560	NCS-W5TTE	+THURSDAY	0200
(Net Temporarily Inactive)				
GLN	3560	NCS-W1CFI	+THURSDAY	0200
		ANCS-WA1JXR		
(Always 9 P.M. on Wednesday night EST/EDT)				
NEN	7040-41	NCS-K3TKS	SATURDAY	1300
		ANCS-KC1DI		
(Always 8 A.M. on Saturday morning EST/EDT)				
WSN-80	3560	NCS-WA6ARA	+THURSDAY	0300
		ANCS-W6RCP-KI6SN		
(Always 8 P.M. on Wednesday night PDT)				
WSN-40	7040	NCS-W6SIY	SATURDAY	1700
		ANCS-W6JHQ-W6RCP-W6SIY-NJ7M		
(Always 9 A.M. on Saturday morning PST/PDT)				

\* On weekends of major contests TCN will meet one hour later.

\*\* If conditions on 7030KHz are poor, QSY to 3535KHz at 0130 UTC,  
(0030 UTC Spring/Summer).

+ Evening of the day before of W/VE.

ADJUST ALL UTC TIMES TO 1 HOUR EARLIER WHEN LOCAL TIME SWITCHES  
TO DAYLIGHT SAVINGS TIME IN SPRING, UNLESS OTHERWISE NOTED.

Please note that 3535KHz is the Michigan QRP Club Net Frequency  
at 0200 UTC. (Always 9 P.M. on Tuesday Night) (chk also 3536Khz)  
MI QRP WELCOMES ALL WHO ARE INTERESTED IN QRP TO QNI ON THE NET.  
Jerry - K8JRO - is Net Control Station for Michigan QRP Club.

OTHER QRP NETS ===== CHECK-IN for the latest QRP News. =====

BC Group (SSB)	3729			Every Evening	0300/0530 UTC
MI-QRP	3535	K8JRO	[Tue.]	+WEDNESDAY	0200 UTC
NE-QRP [SSB]	3855	WA1JXR	[Mon.]	MONDAY	2100 EST
NEIQS (NE illinois QRP)	3560		[Thur]		0200 UTC
OK QRP Group	7060 or 3560		[Sun.]		1330 UTC
NW-QRP	10123	N7MFB	[Mon.]	+TUESDAY	0200 UTC

NW-QRP Ragchew 7035		[Sat.]		0730 WST
N.C.QRP ASSOC. 3710	WA4NID-AA4XX	[Sun.]	"KNIGHTLITES"	2200 EST
VE-QRP 14060	VE6BLY	[Sun.]	SUNDAY	1800 UTC

Please remember to tell your friends about the QRP Nets,  
They might decide to join us after seeing how friendly we can be.  
Yes, the keyboard can also QRS ! (Slow Down). 72 ES QRP DX TU DANNY,  
K3TKS

NOTICE !!! We have openings for NCS/ANCS on all ARCI Nets.

WARNING ! QRP NETS have been proven to be addictive.  
Permission is Granted to Freely Copy and Distribute this Schedule.  
QRP ARCI NETWORK MANAGER - Danny Gingell, K3TKS (C) 1996  
k3tks@bbs.abs.net (Internet) or Packet K3TKS @ WB3FFV.MD.NOAM.USA  
Maryland Milliwatt Club QRP Reference Library (301)572-6789

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George Gingell, user of the UniBoard System @ abs.net  
E-Mail: George.Gingell@bbs.abs.net  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Patrick Franzis <franzis@gdc.com>  
Subject: [4201] 30M kits - Thanks  
Message-ID: <Pine.SUN.3.91.960212164838.11913A-100000@esun212>

I would like to thank everyone for sending me information and opinions  
on 30M kits. Now I just have to wait for that "extra" money to  
appear! :-)

Thanks again,

Patrick - n1ocj/qrp

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: burdick@interval.com (Wayne Burdick)  
Subject: [4194] 40-9er history and comments  
Message-ID: <v02130509ad454ba4cc75@[199.170.106.28]>

Hi folks,

The history of the 40-9er is approximately this:

Early 1995: I saw/heard some of the Pixie transceivers that people had built last year, and thought much better performance would be possible with just a few more parts.

Late 1995: Doug found some 7.040 crystals at the swap meet. He needed a rig designed to help use them up.

These events left me no choice but to do the 40-er. :) Since there were so few parts (about 1/4 as many as a NorCal 40A, for example), I figured it was a good opportunity to design the rig around a 9V supply voltage. Then you could put it into a very small box. Doug did a nice PCB layout to achieve this.

Some things to keep in mind if you build one:

- The limited VXO range has to do with how far you can pull an NE602 oscillator without having it stop. I used an RF choke, but you can increase the pull with a large toroid (like 60 turns or more on a T68-2 or T68-6). But be careful at the low end of your VXO trimmer cap: if the capacitance nears zero, it may stop oscillating (especially when you transmit, which loads the crystal further).

- That 1/2-watt output will drain a regular 9V battery pretty fast, so consider using an alkaline or better yet a lithium battery (available from Mouser). A lithium battery costs twice as much as an alkaline, but you'll get something like 60 hours of operation!

- To keep parts count low, I used an LM380, and only a single-ended connection between that and the product detector (an NE602). You could increase the audio output quite a bit by adding a second JFET and going to differential coupling between the 602 and 386. As it stands there is enough audio to drive headphones to a reasonable volume in a quiet space.

- I'm running everything except the final amplifier off of 5V so that receiver performance and frequency stability will be good down to 6.5V or so. To save a few more milliamps and allow the rig to run all the way to 5.1V, you could substitute an LP2950-5.0 low-dropout regulator for the 78L05.

I worked Michigan (2000 miles) on mine. Have fun!

73,  
Wayne

N6KR

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: bkassel@enet.net (Brian Kassel)  
Subject: [4179] AZ FOX for 2-17L Announcement  
Message-ID: <199602121701.KAA16014@maple.enet.net>

A small group of SQRPion members, and other QRP enthusiasts, will be setting up several QRP stations at Picacho peak, which is located between Phoenix and Tucson. We plan to begin to arrive on Friday 2-16-96, at about 3:00 PM, and stay until Monday 2-19-96, leaving at around noon or so. We will be set up in the campground. In case you have never been there, it is fully paved, and all spots are leveled with hookups, if desired. Those already committed to attend are: N5AQM, N7LQM, KI3K, WW7B, and Myself, W5VBO.

On Saturday 2-17-96, we plan to have a FOX event beginning at 1800L on 7043 plus and minus QRM until 2000L.  
2-17-96 1800L = 0100 2-18-96 UTC.

We will also be operating sporadically at other times through the period, on the same frequency as well as others as conditions dictate.

We will be using a 40M inverted vee as well as an eighth wave portable loop, and an assortment of other antennas. The radios will be an S&S engineering ARK-4 as well as their new TAC-1. Other radios will be there as well. The TAC-1 is being supplied to us by S&S Engineering for our use during the upcoming locally planned QRP field events.

We still plan to go out to another location on 3-23, and go out for the QRP Field Day on 4-27, this trip is in addition to those future events.

All AZ QRP op's are invited to participate. You will have to bring your own camping equipment, food etc., but if you like, you can operate any of the several available radios and or antenna combinations.

Bring your rigs, some wire and a key. Let's have some winter fun!

I will be the first to arrive, so E-MAIL me if you would like me to reserve you a space.

Remember to send your mail to me please, NOT to the list:

bkassel@enet.net

Brian Kassel

W5VBO

AZ WINLINK, QRP-L #404

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996

From: JKXM17A@prodigy.com ( ALLEN SMITH)

Subject: [4150] DCT Loop

Message-ID: <097.00954111.JKXM17A@prodigy.com>

Well, I've struggled with this thing over and over. It seems to have real promise, in spite of the problems encountered. This particular loop is probably still a bit short of length to be perfectly resonant at 7040KHz but a 2 way contact was completed tonight. I answered a CQ by W0IYF, Merl, in Quincy, IL who reported a 339 to me and received a 449 from me.

This was with my 16 ft. loop inside a ground floor closet and fed with about 20 feet of RG58/U. The rig was the NC40A running about 1.5 watts

The sigs on the loop are often not as loud as on the low dipole strung outside. The noise level is a little bit lower on the loop but not significantly. There is room for improvement but this thing may work yet. It is amazing what a person will do for entertainment when towers, beams and real dipoles are no longer available.

72/Allen - AA0YU, Grand Junction, CO.

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996

From: adams@chuck.dallas.sgi.com (chuck adams)

Subject: [4183] Detroit/Troy MI QRPers

Message-ID: <199602121709.RAA08581@chuck.dallas.sgi.com>

Gang,

I must have done something wrong. I don't know what it



was or when, but since I have gotten sensitive to cold weather and someone knows it I have have been assigned duty to the Detroit area starting on Monday of next week. I'll be in the Troy area for two weeks teaching two classes.

I'll bring a couple of rigs (40M and 30M) and some wire. Hopefully I can work something in the evenings or go out in the parking lot. :-) Although I hear it is cold up there this time of year still.

But I should be able to free myself up for a meeting with one or more fellow QRPers from the MI group. Email me and we'll setup a schedule. I'll buy the anti-freeze. :-)

dit dit

I was up there a few years ago and with the MXM simple receiver I was hearing all of EU on 40M with a 3M random wire. No wonder you guys work DX all the time. :-)

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Thom.LaCosta@f0.n105.z105.fido261.qis.net (Thom LaCosta)  
Subject: [4182] Drake Mods  
Message-ID: <553\_9602121226@fido261.qis.net>

Hello All!

I have a Drake t4xB...obviously too powerful to joining you all. Does anyone know of any mods that would allow me to get the power down to the QRP levels, without doing things like taking out the finals? (g).

Maybe an impossible project, but I'm willing to experiment to some degree. I was thinking of taking the output of the driver tube and running it out to a connector....but then I'd have to build a pi-network or something like that.

Thom LaCosta  
N3WDV  
Home of HAMLIB

--

|Internet: Thom.LaCosta@f0.n105.z105.fido261.qis.net  
|Standard disclaimer: This user speaks only for him/her self.

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Thom.LaCosta@f0.n105.z105.fido261.qis.net (Thom LaCosta)  
Subject: [4203] Drake Mods  
Message-ID: <58e\_9602121733@fido261.qis.net>

Steve Greene wrote in a message to All:

SG> From: Steve Greene <sgreene@washsq.com>  
SG> Subject: Re: Drake Mods

SG> On Mon, 12 Feb 1996, Thom LaCosta wrote:

>  
> Hello All!  
> I have a Drake t4xB...obviously too powerful to joining you all. Does  
SG> I have a T4XB/R4B, too!  
SG> For CW, here's what I do: tune it up as normal (into a dummy  
SG> load), then use the drive control to drop down the power. You'll  
SG> have to adjust the VOX sensitivity to get the relay to key.  
SG> I \*think\* the same approach would work for SSB as well, but haven't  
SG> tried it.

I tried that, but the watt meter I have isn't accurate enough at low power levels to be much help(g).

Another way to 'gimmick it' would be to reset the bias, ala the instructions for novice operation....but I didn't mess with that, as roaching the finals is no longer a 5 or 10 buck expense as it was in 'the old days'.

Guess I'll get it as close to 5 as I can...then I won't feel too bad trying to join in with you QRP folks. I've set it back during some qso's...and the other station says I've lost couple of s-units....but they still copy me.

Nice to hear from another 'Draker'...mebbe we can set up a sked...as I do really like the way they sound on cw (g).

> I was thinking of taking the output of the driver tube and running  
> it out to  
> a connector....but then I'd have to build a pi-network or something  
> like that.

SG> You could possibly just pull the finals and run a shielded cable

SG> directly into the PI network - though I'm not sure how you'd  
SG> adjust it. Any suggestions from the group?

Hmmm, another approach might be to kill the B+ to the finals...then there might  
be enough leaking through to get to the pi-net.

Thom LaCosta  
N3WDV  
Our Business is Business

--

|Internet: Thom.LaCosta@f0.n105.z105.fido261.qis.net  
|Standard disclaimer: This user speaks only for him/her self.

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: "Harvey D. D. Hetland" <HDHETLAND@paccd.cc.ca.us>  
Subject: [4204] Drake T4X QRP  
Message-ID: <1DDF3A25C7@manage.paccd.cc.ca.us>

This was originally sent directly to the person asking about QRP qith the Drake  
T4X series of transmitters, but was returned due to an invalid address. Sorry to  
take the list "bandwidth".

I have two T4X-B and one T4X-C transmitter. The method used to reduce the power  
when used with the Drake TC-6 and TC-2 6m and 2m transverters was to remove the  
screen voltage on the finals. The screen leads were brought out to RCA phono  
connectors on

You can place a variable resistor in the screen lead to decrease the voltage on  
the screen and thus the power. The screen lead is readily accessible on the  
bottom side where it enters the area of the final sockets via a feed through.  
With some experi

73, Harvey, N6MM.

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: RobCap@aol.com  
Subject: [4165] For Sale (or trade): Norcal Sierra  
Message-ID: <960212100742\_220056039@mail02.mail.aol.com>

For Sale: Original Sierra by the Norcal QRP club. The radio was built by  
me, and has some mods included: 1) built-in speaker, 2) rear-mounted power  
pot, 3) Built in panel fuse, 4) subsitution of PL-259 for the original BNC

antenna jack. Note: no band modules are included, so purchaser must furnish his/her own band modules.

Price is \$150, which includes UPS ground shipping. I would also be open to creative trades.

I think that this is quite a bargain. A new (unbuilt) Sierra without modules goes for about \$200.

73,

Rob, WA3ULH

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: "Robert J. Gobrick" <rgobrick@nfld.com>  
Subject: [4186] GM-20 Step-by-step instructions (long)  
Message-ID: <199602121824.0AA00185@public.compuser.net>

QRP-L Gang,

I want to thank Chuck Adams K5FO for his recent posting of a step-by-step instruction set for the Small Wonder Labs (Dave Benson NN1G) neat little Green Mountain 30 transceiver kit. Dave has a good set of instructions but he decided not to go the step-by-step approach (like the ole Heathkit approach) possibly to ward off the folks who claim that the rig would not be categorized as "homebrew" if it had step-by-step instructions. Believe me when you get done building Dave's homebrew rig either way you'll sit back and marvel how all those parts got squeezed on a 5" X 3.5" board.

For the folks out there who want a "tried-and-true" instruction set for the Green Mountain 20 (GM-20) I've gone ahead and marked up Chuck's copy with my GM-20 building notes. The GM-20 is one neat little rig and I'll give a future report on it. But in the mean time here's the GM-20 instruction set. Again send your thanks to Chuck since he spent all the time typing in the original GM-30 instructions - with the marvel of word processing I've just edited it and have given credit where credit is due.

Good luck and have fun 73/72 Bob V01DRB/WA6ERB

----- START -----

Green Mountain 20M rig by Dave Benson, NN1G

Step-by-step installation instructions by Chuck Adams, K5FO.  
Version 1.0 for 30 meter kit and edited by Bob Gobrick  
V01DRB/WA6ERB for 20 meter kit. No guarantees, but these may

help the newbies and hopefully even some of the old timers. Print this out and mark in the squares as you go along. Let me know via adams@sgi.com if you find any errors or additions. Let me know if they helped also. Something that might help you before you start. Photocopy page 9 (maybe twice). Sit down someplace quiet and with a highlighter go through one time highlighting each part as you see it below. It does two things. Checks my work and it gets you ready to sit down and do the real installation of parts. I use a highlighter for the real installation also. Just looks neat.

NOTE: These steps are on board parts. It is left as an exercise for the reader to put the completed rig in a case with connectors etc.

-----start here-----

Use page 9 layout since it is at 150 percent. Makes location of components easier. Also read all instructions before you begin because some of the parts installation for the Heterodyne L0 section come after that section.

- [ ] Solder 8-pin IC sockets at
- [ ] U4 [ ] U3 [ ] U2 [ ] U1 [ ] U6 [ ] U7
- [ ] Solder 14-pin IC socket at U9

Now starting at upper right hand side of board and working our way down the right hand side.

- [ ] 2.2K resistor (red-red-red)
- [ ] 220 resistor (red-red-brown)
- [ ] 0.01 disk capacitor (may be marked 103)
- [ ] Q3 2N2222A metal transistor
- [ ] 22K resistor (red-red-orange)

Note: I installed mine in other hole as marked. This to allow capillary flow of solder to upper pad. Notes will use term 'reversed' for others that I did the same way.

- [ ] C33 Not used 30M
- [ ] C31 Not used 30M
- [ ] C32 5pF capacitor to the left of L5
- [ ] L5 T37-6 (yellow toroid) 17T 10" of wire
- [ ] C34 8-70pF 6mm trimmer cap
- [ ] L4 T37-6 (yellow toroid) 17T 10" of wire
- [ ] C30 8-70pF 6mm trimmer cap
- [ ] C29 5pF cap
- [ ] Y7 18.432 MHz crystal (don't confuse with 8MHz crystals)
- [ ] 150pF capacitor
- [ ] 47pF capacitor
- [ ] 0.01uF capacitor (103) just to the left of U6

- [ ] 0.01uF capacitor (103) just to the right of U6
- [ ] 150pF capacitor (150 or 151 marking)
- [ ] 10pF capacitor
- [ ] 2.2K resistor (red-red-red)
- [ ] Q2 2N2222A metal transistor
- [ ] 100 ohm resistor (brown-black-brown)
- [ ] 0.01uF cap (103)
- [ ] 22K resistor (red-red-orange) (also reversed)
- [ ] 47K resistor (yellow-violet-orange)
- [ ] 0.001uF capacitor (marked 102) very small critter
- [ ] 0.001uF capacitor (marked 102) very small critter
- [ ] 0.001uF capacitor (marked 102) very small critter
- [ ] C20 0.0047uF capacitor (4700) clear coated aluminum
- [ ] C21 0.001uF capacitor (1000) clear coated aluminum
- [ ] C19 2-27pF variable cap (three legged cap)
- [ ] C18 100pF capacitor
- [ ] D1 MV1662 variactor diode (two legged critter looks like plastic transistor)
- [ ] L3 T37-6 (yellow toroid) 26T 14" of wire
- [ ] 1M resistor (brown-black-green)
- [ ] 0.01uF cap (103)
- [ ] 47K resistor (yellow-violet-orange)
- [ ] D3 1N4148 diode - general note to read docs on orientation
- [ ] 3 pin header at TUNE
- [ ] 1M near/adjacent to U9 socket (brown-black-green)
- [ ] 2.4K resistor (red-yellow-red)
- [ ] 4 pin header at TUNE
- [ ] 47K resistor (yellow-violet-orange)
- [ ] D2 1N4148 diode
- [ ] 1M resistor (brown-black-green)
- [ ] C35 10pF capacitor left of 22K
- [ ] C36 47pF capacitor left of C35

See page 10 for the following components.

- [ ] U5 78L08 voltage regulator
- [ ] 0.01 cap (103) as shown on page 10 next to U5
- [ ] D9 1N4001 diode, large diode
- [ ] two pin header at PWR

- [ ] Install NE602 at U6
- [ ] Install CD4066 at U9 (read docs on handling)

Now you are ready to go off and test the L0 Hetrodyne Osc. Then come back and continue assembly. Do not proceed further until you have passed the initial alignment procedure.

- [ ] 0.01uF capacitor left of 47K and D2

[ ] D10 - 7.5V Zener (taped on sheet of paper)  
[ ] C38 220pF capacitor  
[ ] RFC3 6.8uH choke (in RFC envelope) (blue-grey-gold)  
[ ] C37 47pF capacitor  
[ ] Y6 8.0000 MHz crystal  
[ ] C39 10pF capacitor  
[ ] C40 8-70pF variable capacitor  
[ ] C41 150pF (don't solder upper leg to pad yet)  
[ ] C42 820pF capacitor (left of U7)  
[ ] C45 8-70pF variable capacitor  
[ ] 0.01uF capacitor (103)  
[ ] C5 8-70pF variable capacitor  
[ ] C3 8-70pF variable capacitor  
[ ] C4 5pF cap  
[ ] C1 820pF capacitor  
[ ] C2 150pF capacitor  
[ ] 0.01uF capacitor  
[ ] C6 270pF capacitor  
[ ] L1 T37-6 toroid (yellow) 14T 9" of wire  
[ ] L2 T37-6 toroid (yellow) 14T 9" of wire  
[ ] C7 220pF capacitor  
[ ] RFC1 10uH choke (brown-black-black)  
[ ] 1K resistor (brown-black-red)  
[ ] C8 33pF cap  
[ ] 0.01uF cap  
[ ] 0.01uF cap  
[ ] W1 jumper  
[ ] 1K resistor below U5 (brown-black-red)  
[ ] 100 ohm resistor (brown-black-brown)  
[ ] C13 270pF (red-violet-brown)  
[ ] RFC2 choke 10uH (brown-black-black)  
[ ] 1.5K resistor next to U2 (brown-green-red)  
[ ] Y4 8.0000MHz crystal  
[ ] C12 270pF cap  
[ ] Y3 8.0000MHz crystal  
[ ] 0.01uF cap (103) to the left of 33pF position  
[ ] 33pF cap  
[ ] C11 270pF cap  
[ ] Y2 8.0000MHz crystal  
[ ] C10 270pF cap  
[ ] Y1 8.0000MHz crystal  
[ ] C9 270pF cap  
[ ] T1 IF transformer  
[ ] C15 33pF cap  
[ ] C43 820pF to the right of L7  
[ ] L7 T37-6 toroid (yellow) 15T 9" of wire  
[ ] 470 ohm resistor (yellow-violet-brown)  
[ ] Q5 2N2222A metal transistor (silkscreen wrong)

- [ ] Q4 2N2222A metal transistor
- [ ] 10K resistor (brown-black-orange)
- [ ] 0.01uF cap
- [ ] C44 150pF cap
- [ ] 22K resistor (red-red-orange)
- [ ] 220 ohm resistor (red-red-brown)
- [ ] L6 T37-6 toroid (yellow) 15T 9" of wire
- [ ] 3.3uF electrolytic cap (long lead is the +)
- [ ] 1K resistor (brown-black-red)
- [ ] 0.01uF cap (103)
- [ ] 51 ohm resistor (green-brown-black)
- [ ] 0.01uF cap (103)

OK, now we are going to start down the lefthand side to finish up. It's getting to look pretty good now, isn't it?

- [ ] 470uF electrolytic (longest lead is +)
- [ ] 2.7 ohm (red-violet-gold) right of 470uF cap
- [ ] 0.01uF cap (103)
- [ ] C17 220pF cap
- [ ] Y5 8.0000MHz crystal
- [ ] 0.01uF cap (103)
- [ ] C16 47pF cap
- [ ] L12 T37-2 toroid (red) 23T 14" of wire
- [ ] 0.01uF cap to the left of U2 (103)
- [ ] 2.7 ohm just above U4 (red-violet-gold)
- [ ] 0.1uF cap
- [ ] 2 pin header at AF OUT
- [ ] 3 pin header at GAIN
- [ ] 220uF electrolytic cap (longest lead is +)
- [ ] 0.01uF (103) just below U3
- [ ] 0.033uF cap
- [ ] 0.1uF cap
- [ ] D4 1N4148 diode
- [ ] 1M resistor (brown-black-green)
- [ ] Q1 MPF-102 MOSFET
- [ ] 1M resistor (brown-black-green)
- [ ] 0.1uF cap
- [ ] 0.1uF cap
- [ ] 100 ohm resistor (brown-black-brown)
- [ ] 0.01uF cap (103)
- [ ] 47uF electrolytic cap (long lead is +)
- [ ] 0.01uF cap (103)
- [ ] D11 33V Zener (taped to sheet)
- [ ] L8 T37-61 toroid (black no dot) 8T (11T?) 6" of wire
- [ ] T2 transformer (see instruction manual)
- [ ] 4.7K resistor (yellow-violet-red)
- [ ] 22K resistor (red-red-orange)



[ ] Q6 2N3906 transistor (plastic) not the big space  
 where the final PA Q7 is mislabeled  
 [ ] R1 variable resistor  
 [ ] L11 T37-61 toroid (black no dot) 27T 15" of wire  
 [ ] 0.1uF cap  
 [ ] D5-D8 1N4148 diodes  
 [ ] C49 8-70pF variable cap  
 [ ] 0.1uF cap  
 [ ] C48 220pF cap  
 [ ] C47 560pF cap  
 [ ] C46 330pF cap  
 [ ] L10 T37-6 toroid (yellow) 13T 8" of wire  
 [ ] L9 T37-6 toroid (yellow) 11T 7" of wire  
 [ ] Q7 2SC799 final PA transistor (silkscreen and page 9 mis-  
 labeled as Q6 should be Q7) - Add heat sink  
 [ ] MMIC per instructions (and SWL 10/95 board fix if needed)

OK, good job. Now go back and double check your work.

Deflux your board.

This concludes my list of steps to help you. If you  
 need further help, email will probably work. Good  
 luck and let me know if you wanna try a GM to GM contact.

--

Chuck Adams (K5FO CP-60) adams@sgi.com

Box 181150, Dallas, TX 75218-8150

and Bob Gobrick (V01DRB/WA6ERB) rgobrick@public.compuserve.nf.ca

----- END -----

Bob Gobrick	V01DRB/WA6ERB/VE2DRB	Newfoundland, Canada
QRPer	Galore - QRP	ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP
Internet:	bgobrick@terra.nlnet.nf.ca	
	rgobrick@public.compuserve.nf.ca	
Compuserve:	70466.1405@compuserve.com	

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996

From: Brad Mugleston <bmug@gw1.com>

Subject: [4164] Grid Square Calculations

Message-ID: <199602121456.AA00428@gp-ipc54.gw1.com>

Good morning,

I need some help. I can calculate my grid square for the first four characters but I am lacking the math for the last two. My neighbor gave me my Long and lat using his GPS so I thought I should have my complete grid square, but I can't guess the math for the last two characters.

Any help?

72, Brad

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: herr@ridgecrest.ca.us (Michael Herr)  
Subject: [4163] Grinding rocks  
Message-ID: <v01530502ad45793d744a@[199.120.150.49]>

When I was WN6ARA, I couldn't afford a 40 mt xtal. I found a xtal (ft243 style) at about 3.2 mhz. I found it using a small plate of glass and very, very light emory paper taped to it. Nice big figure 8 patterns. Got it up into the 3.5 region and then doubled it to 7170. I had a ball! It can be done!

72  
Mike

ps - I still have the xtal!

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: KFGlynn@aol.com  
Subject: [4192] Jim Cates' Phone Number  
Message-ID: <960212150734\_420731423@emout04.mail.aol.com>

Hello everyone,

Does anyone have Jim's phone number?

Tnx es 73 de Kevin KB2TE0

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: W0HEP@aol.com  
Subject: [4176] Kanga US  
Message-ID: <960212113542\_220115283@emout06.mail.aol.com>

Does anyone have the latest E-mail address for Bill at Kanga US? The address I have appears to be no good.

Please reply to WOHEP@aol.com and not to the list.

Tnx.,  
Rich WOHEP

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Subject: [4157] Kester Solder  
Message-ID: <199602120717.HAA07486@chuck.dallas.sgi.com>

Got a box of the solder (1 pounder) out to look at the label. Here are the gory details.

Kester (R) Organic Core Solder  
Net Wt 16 oz. (1 LB) (454 g)  
SN6ePB37 #66 331  
0.031

So it looks like #66 core and the 331 is probably related to the 0.031" diameter. There is a smaller diameter available also, but you don't see it that much. The above box I got at Anchor Electronics in CA last trip.

Be sure to use, for kits, a soldering iron of 25W or less. I hope that noone is trying to use 40W or more. Heat stress on parts can cause some major problems.

FYI

dit dit

Oh, I think it's about \$7 per box and hopefully we can find some good deals at the meeting in May.

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996

From: Thom.LaCosta@f0.n105.z105.fido261.qis.net (Thom LaCosta)  
Subject: [4211] Lists  
Message-ID: <59f\_9602122215@fido261.qis.net>

Hello All!

I don't have access to usenet, but I do operate a gateway, which gives me access to mailing lists.

Wondering if someone would be kind enough to supply me with a list of lists that pertain to amateur radio.

To keep bandwidth down, the replies can go to:  
thom@fido261.qis.net

thanks

Thom LaCosta  
N3WDV  
Our Business is Business  
--

|Internet: Thom.LaCosta@f0.n105.z105.fido261.qis.net  
|Standard disclaimer: This user speaks only for him/her self.

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996  
From: gary-r-hanson@uiowa.edu (Gary R. Hanson)  
Subject: [4202] MXM Products  
Message-ID: <v02130505ad456b3f1039@[128.255.164.50]>

Talk about bad timing. For the first day in 3 months I didn't start out my morning by reading the QRP-l Digest. Then, over the noon hour, I went to my vault, counted out the pennies, and sent Bruce Williams a money order for the MXM-40 meter transceiver. I've been waiting months to do it. I walked back to the office and read the latest QRP-L Digest to find a group buy had just been initiated. Maybe I can call Bruce and tell him to sign me up.

I've been using an early MXM 40 meter crystal controlled, manual switch for transmit and receive into a delta loop and have worked a surprising number of stations...just have to listen a long time to snag somebody in that 800 Hz around your crystal. Even at that I've worked Mexico (closer than New York!), several Canadian stations and Columbia (HC4). The old rig I have is a single conversion receiver and I can hear just about anything that's out there with my delta loop in Texas. My indoor apartment antenna in Iowa isn't quite as good, but the bottom line is that Bruce designs one heck of a great receiver. He says the newer double conversion model puts the

single conversion one to shame. I can't wait!

I've built 3 other MXM Tx Receivers and use them when I travel just to listen in on the activity. Being a glutton for punishment, I etched the printed circuit board from scratch making my own mask by copying the original pc board template from the magazine...that too works great. I put the 20 meter version in a very small case, added a one-transistor rf amplifier, and wound a quarter-wave 20 meter helical antenna on a wooden dowel about 9 inches long, wrapped it in electrical tape. The unit is powered by a 9 volt battery (lasts hours and hours) and it looks smaller than most 2 meter hand helds. I added a little circuit to use varicap diodes instead of the variable cap that Bruce sells. Those varicaps really help miniaturize the receiver. With the short antenna and rf pre-amplifier, I often have to turn the volume back on strong signals because of overloading. The varicap diodes result in some drift and some day I will add a temperature compensation circuit and a voltage regulator to calm it down on 20 meters. Also, built this set up on 80 meters and almost no drift there. On 75 meters, I added a 6 position switch to add additional fixed capacitors in parallel with the varicaps to give me the bandspread over about 120 KHz of the 80 meter phone band. The small helical antenna with an rf preamp brings those 75 meter signals right up to loudspeaker volume.

No, I don't work for MXM industries, but I am one happy user. If you want a rig where the receiver will hear anything and everything that's out there, go for the MXM.

Gary, KJ5VW/0

Gary R. Hanson  
Visiting Professor  
College of Education  
The University of Iowa

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Subject: [4177] NEC2  
Message-ID: <199602121653.QAA08530@chuck.dallas.sgi.com>

Gang,

Since W5TFB, W6EMD, and others have shown interest and not wanting to do this several times, let me do it once.

Numerical Electromagnetics Code (NEC) is a FORTRAN, with C versions also available, program that allows one to model antenna systems and do some serious antenna design and study work.

1. It requires an advanced system, preferably a workstation class system, but there are some PC versions available if you have a numerical coprocessor. And it eats up a lot of memory and disk space.
2. The two volume set of manuals are not in machine readable form and I have them on order and should get them today. Cost me \$133 US coin of the realm. You can get something like ELNEC from W7EL for a whole lot less money with docs.

So you are on your own here. Let me give you some starting points.

<http://www.cici.com/~richesop/nec/index.html>

<http://www.funet.fi/pub/ham/antenna/NEC/00-index.txt>

and for ftp access

[ftp.netcom.com /pub/ra/rander/NEC](ftp://netcom.com/pub/ra/rander/NEC)

[ftp.emclab.umn.edu /pub/aces/NEC](ftp://emclab.umn.edu/pub/aces/NEC)

Also there is a mail reflector for users of NEC codes and their derivatives. It is not like qrp-l as all the users are serious and many do it for a living. Many many PhD's etc. In fact maybe six or so messages a week. :-)

The above sites have MAC and PC versions as well as the source codes in compressed format (UNIX utility).

FYI and I can't help you here as I am on a timeline to get to Detroit for two weeks starting next week. Posting to follow.

dit dit

--

Chuck Adams (K5FO CP-60) [adams@sgi.com](mailto:adams@sgi.com)  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: n2mnn@openix.com (STEVEN PITUCH)  
Subject: [4209] NW SPRINT  
Message-ID: <199602130109.UAA16318@pantera.openix.com>

The sprint was tough from NJ with .95 Watts. I only got 5 contacts but they were worth the effort.

40M KG0TW MO  
40M K0FRP CO  
20M AA7QU OR  
40M WA8LCZ MI  
20M N5SAN AR \*\*\*

\*\*\* My first QSO ever in 1991 was with N5SAN, 10 Meters with QSB. The whole thing lasted about 20 seconds before he faded away. I was so excited I wrote him a long letter. He commemorated the event by sending me a bunch of literature from the Arkansas bureau of tourism. Corny, but I was walking on air for months. I couldn't understand at the time why he had only used 3 Watts. A few years later, I saw his call in a contest listing in QQ, and wondered if we'd ever QSO again. It finally happened on Sunday. Heard him several times, but I knew from his exchange that he was 5 W, and my 1 W would be marginal. Tried several times without success. Finally at 22:33 he shot up enough for me to know the time had come. He gave me a 339. In 1991, he gave me QSO #1 for Arkansas for my 100 W WAS, and now I'm sending him a card to confirm QSO #1306 for the same state for milliWatt WAS.

Like I said, a good contest, not in quantity, but certainly in quality. How come everybody was using so much power (5 Watts)?

73,  
Steve, N2MNN  
N2MNN@OPENIX.COM

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: ae4ic@nr.infi.net (BOB KELLOGG)  
Subject: [4169] NW80/20 - Part II  
Message-ID: <199602121538.KAA17952@mh004.infi.net>

All right, we've got sound from the receiver that sounds like 40 Meters.  
LETS GET THIS THING BUILT!!

VARIABLE BANDWIDTH OPTION: 3 diodes, 3 resisters and a pot and we're there. It works! The volume drops a lot when its closed clear down, but I guess your gonna have that when you narrow the pipeline. (background noise drops,

too!)

METER CIRCUIT: 5 parts, and we're checking the meter circuit. Honestly, I don't know if I want a meter, but let's try it, because this will enable us to peak the transformers some more. LOOK AT THAT NEEDLE BOUNCE when we tune across the band!

WHOA! the next step is transmitter install! - are we really ready for that??

TRANSMITTER: WOW, 34 steps and twice that many parts, but here we go. (what happened to the test in stages deal? Remember that old joke about the guy who agreed to take a sip from a spittoon on a bet -- and ended up drinking the whole thing? He said that once he got started it was so stringy he couldn't stop. Well, now that we've drunk the whole transmitter, let's do some testing.

Oh, I guess we will test in stages.

First the XMIT MIXER AND DRIVER: 5 steps to this. Really need an RF voltmeter. I don't have anything but a home brew one that I don't trust, and I do have a scope, so I hook it up, instead. At first there's nothing on the screen but a flat line, but as I peak T4 and T5 there's very neat sine wave that gets bigger and bigger. HOLY COW! 20v peak to peak, squared, divided by 50 = 8 watts! -- no, that's not right. Well, any way, It's a good looking signal, and the transformers are peaked.

Here, I made a trip to Radio Shack to pick up some of the jacks I need. While I was there, I looked at the recommended case. Gee, it's a cute little bug for only \$6.99. Had planned to make a case out of circuit board material (a real job) -- Hmmm. LETS GET THIS THING BUILT!! I buy the case.

CONNECT THE CONTROLS AND JACKS: on the home stretch, now. 7 sets of wires are attached to the various controls, antenna, speaker, key and power jacks.

POWER AMPLIFIER: 3 toroids and the PA transistor and we're done! Well, all of the electronic parts are assembled, anyway.

INSTALLATION AND FINAL CHECKING: Oh, boy, this is what I've been waiting for! Drill the case and fit the board in place. Very neat, if I do say so myself.

FINAL ADJUSTMENTS:

BFO: No problem setting it, just follow the directions.

RIT: Easy job using a voltmeter. Hmmm. Center position electronically is not the mechanical center of the pot. Oh, well, I guess the diodes are not linear. I'll worry about that later.



VFO: Use my trusty frequency counter again, although I could have used the station receiver. Very nice 200+ KHz range. Set it right on 7.000 to 7.200.

TRANSMITTER: Plug in a dummy load I made from resistors and follow directions, using a wattmeter, (or the rigs meter option). Slowly turn up R14 the RF level pot and watch the meters for POWER! -- nothing. Hmmmm. Hmmmm.

to be continued.

Bob Kellogg, AE4IC  
Prolably, but not nececelery. - Benny Hill

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996  
From: ae4ic@nr.infi.net (BOB KELLOGG)  
Subject: [4193] NW80/20 - Part III  
Message-ID: <199602122012.PAA02704@mh004.infi.net>

---- WARNING ---- THIS INSTALLMENT IS NOT FOR THE FAINT OF HEART ---

Remember, the xcvr is installed in its case, and we're making the final adjustments. But, we get no power output. Welllll, let's see, we knew sooner or later, some of the problems we glossed over would come up to bite us. The manual says it may be necessary to spread or squeeze the turns of L6,L7 in order to get full power. But, I've got no power. Time to troubleshoot.

I removed the board from the case and study it carefully for solder bridges. None. (of course not) Hmmmm. What do I know about this rig so far. Well, I know the receiver was using way too much current. -- The resistance between the +12 volt line and ground is abt 132 ohms. It should be 200 ohms. Well, I guess I'd better find and fix that problem.

(dear reader, please note the logic here. The TRANSMITTER doesn't work, so I'm going to work on an apparant problem I discovered when building the RECEIVER. Never mind that the receiver seems to be working well. What can I say. Hindsight is a wonderful thing)

So, I remove the xcvr from the case. (this is a pain, because it involves desoldering the power and antenna leads as well as removing the jacks and controls) Hmmmm. You know, were talking about drawing too much current here. The most likely culprits would be a leaky electrolytic capacitor or bypass. Ok, the looking at the diagram, the +12 volt line has 7 possible culprits.

I get out the desoldering braid (great stuff) and start with the largest, removing one, checking the resistance. If resistance is still 132 ohms, I replace it and go to the next. 7 removals and replacements later, I'm getting really good with the braid. (some capacitors just dropped out of their holes) BUT, the resistance is still 132 ohms.

Hmmmm. Let's make some more resistance measurements, maybe there's something area where we can find wrong resistances. I'm a little afraid to make voltage measurements because I'm drawing too much current and could be burning something up. Oh, great, the manual includes a chart with resistances and voltages measured at each IC and transister.

I start at the beginning. My measurements are within +/- 10% on Q1,Q2,Q3, but Q4 Source and Drain should be 8.7K and I measure 517 ohms. OUCH! Well, what does Q4 do? That's the RIT fet. Maybe that's why the control is off center. (?) Well, that's not why the transmitter won't work. Move on.

Q5 emitter should measure 14.5K, I measure 132 ohms. LOOKS SERIOUS. But Q5 is the key switch, and it apparantly works ok. ?????? Hmmmm. Well, lets check the ICs.

U1 checks Ok, U2 pins 1,2 and 8 should be 14.6K, I measure 35.8 ohms and there's a sinking feeling in my stomach. Something's BAD wrong. Well, let's continue the check. We might as well learn the worst. U3 is ok, except for pin 7 which should be 0 ohms. Measures 25.3K -- another problem. U4 is ok. U5 ok, except pin 6 should be 14.6K and measures 132 ohms.

U6 -- Uh oh, somethings wrong with the chart. U6 only has 3 pins, but measurements are shown for 8 pins. And, you know what?, I don't see any measurements for Q9 at all! Maybe I've got the wrong chart. Well, U6 is a voltage regulator. It probably works or has completely failed, so let's move on.

U7, also a voltage regulator, is ok. U8 - wait a minute -- three pins shown, but 8 on the chip. So that's it, U6 and U8 have somehow been transposed on the chart. If that's what happened, then U8 is ok, but U6 should measure 14.4K on pin 3 and I measure 132 ohms.

Ok, measurements complete, let's look for a pattern. I SEE ONE! Every one of the measurements that are supposed to be about 14.5K are the +12v line. Am I going in circles? Maybe not. If I remove the IC's one at a time, and check the resistance on the +12v line, and one of the ICs has an internal short, I should find the bad one. Am I HAVING FUN YET??? I don't know for sure, but I feel like a super sleuth, zeroing in on the slipperiest con man on the continent.

So, I check the ICs and they're all ok. Hmmmm. Well, let's look at the

circuit some more. U2 seemed to have the most problems around it. Let's see, pins 1,2 and 8 are connected together through T3, and they are all supposed to measure over 14K. but actual is around 36 ohms. Bingo! They also connect through a 100 ohm resistor to the +12v line. That's where the problem is!!!! The +12 volt line is measuring abt 132 ohms because we're measuring that 100 ohm resistor plus the resistance it T3, WHICH MUST BE SHORTED!! Am I good or what!!???? (remember, dear reader, the receiver works)

Well, I've removed a few IF transformers in my day, mostly unsuccessfully. So, I look in my junk box to see if I've got a replacement. Naturally, I have white tops, blue tops yellow tops and red tops, but no green tops. I don't really want to try to remove that transformer, anyway. -- Hmmmmm. actually, since the receiver seems to work, maybe that's not it. -- but what else could it be?

Well, I know what I'll do, I'll email Roy Gregson and ask him his opinion.

---- TO BE CONTINUED ----

Bob Kellogg, AE4IC

Probably, but not nececelery. - Benny Hill

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996

From: PDouglas12@aol.com

Subject: [4168] NW80/20 first contact

Message-ID: <960212101652\_220061893@mail02.mail.aol.com>

Gang,

I would like to announce I have my first DX contact with my NW 20. (Germany, 4.8w, Saturday morning. RST 439) I think I found a small glitch in the tune up instructions. C61 must be peaked or the receiver will be somewhat deaf. I don't see reference to peaking C61. (C61 is the trimmer part of the isolation circuit between the xmit and receiver). I can't find reference to adjusting it in the manual, so maybe I have found a glitch in the instructions (or maybe I need new glasses--these graduated bifocals can be a bear!). Anyway, when the receiver is peaked up, don't forget to peak C61.

Now on to my NW80. There seem to be several of us building NWs at once.

Preston WJ2V

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996

From: adams@chuck.dallas.sgi.com (chuck adams)

Subject: [4155] NW80/30 Kit

Message-ID: <199602120700.HAA07441@chuck.dallas.sgi.com>

Gang,

I see there are a few of us building the new W6EMT kits.  
See previous announcements and ongoing discussions.

I got the 30M version. So I'll refer to it as the NW80/30. It's advertised as the NW80/20 kit with options for 80,40,30, and 20M. It's a Rick Littlefield design with mods and updates. Even has variable bandpass, the rage of the '96 line of kits.

I haven't finished yet. Hit a snag on a couple of RF chokes, but soon to be fixed.

If you are making a decision between the RadioKit and this one, get the W6EMT kit. No contest. This is the only time that I have recommended one kit over another. Of all the kits that I have done only two have never worked. I got a RadioKit from someone on the list that they started. Never got it working. The other one was a preproduction kit I got at HamCom a number of years ago. Three updates from mfgr still didn't get it going. It looked good and a picture of it (the one that I built) was floating around.

This kit is single sided board and well laid out and the instructions are far superior to the RadioKit. For the absolute beginner, this one should do it, but you'll still have to be careful. We all still do, some more than others. :-)

Someone mentions the flow of solder. This board reminds me of the single-sided Heath boards. The liquid solder flows under the solder mask (green) and along the land. In fact, if you see the solder go more than a couple of millimeters(mm) then you are holding the iron on the land too long and using too much solder. I use 63/37 with 331 flux core (water soluble) and 0.031" diameter. Use sparingly and you'll do just fine. Was the bottom of the board with warm water and use an old toothbrush and don't use it again for brushing teeth. :-)  
Save it for cleaning boards. Oh, and don't get the component side wet. The reason I keep bring this up. With this kind of solder from Kester and the washing it comes out so shiny. Looks like a wave-solder job.

Just a hint for the kit. Read the instructions very carefully on which IF transformers to remove the Cap from. I, on the 30M version, just happened to miss the T3 mod. I managed to fix it without unsoldering the IF transformer!!! Don't try this at home kiddies. This one is for experts only. In fact, I'm going to keep it a secret how I did it. :-) How would you remove the cap without destroying and unsoldering the IF transformer?

I haven't fired it up yet. Gotta wait on parts, but it should fly the first time.

dit dit

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: SYDV00A@prodigy.com (MR FLOYD E SMITHBERG)  
Subject: [4197] NW8020  
Message-ID: <013.00994267.SYDV00A@prodigy.com>

Well I might as well add my 2 pesos worth. Finished the rig thurs after a few minor glitches eg blew Q5 and replaced with MPS2907 I happened to have. Rig would mute but no RF out or 'side tone'. Missread 300 and 301 cap for vfo and found it up at 10mhz. Other wise things went nicely. Receiver is super sensitive and xmtr output is a full 5+Watts. Have worked TX, WA, NY, V73C in the Marshalls and heard BY7KH. Great little rig. Am building a case now like the NC40A. Have the 3x5" front and back panels done and controls mounted...left 1" space below the pcb for KC1 keyer on the front panel. Attached all control wiring to bottom side of pcb so none on topside and gives very neat appearance. With the removable/snap on top and bottom covers the rig will be nice for serviceing or showing-off!  
One problem and don't know if it's me or the rig....don't get single signal. Have set the bfo on both sides and repeaked but can't eliminate the 'other side' signal. Suggestions?  
Floyd NQ7X Phoenix

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Larry East <LVE1@inel.gov>  
Subject: [4175] OHR 30M Exp II VFO Tracking & Drift  
Message-ID: <2.2.16.19960212163514.25bf4bf2@garnet.inel.gov>

In a post I made a couple of weeks ago, I mentioned that I had improved the VFO tracking of my 30M Explorer II by adding some additional capacity across C62. I also made some comments on temperature drift and on the mechanical instability of C62 and was going to check its temperature stability when I got "a round tuit". Well, I got "a round tuit" this weekend, and here is my follow up:

Although the original C62 suffered mechanical instability which made adjustment difficult, it did not appear to add significantly to temperature drift. The primary sources of temperature drift appear to be the NE602 IC itself and the VFO inductor.

[Oak Hills has replaced C62 with a fixed capacitor in its latest production of kits; this makes VFO alignment easier but does not allow for any change in the VFO bandspread.]

My "final solution" to my temperature drift problem and attempt to improve VFO tracking was as follows:

C62 was replaced with a 2-12pF NPO trimmer.

62pF NPO and 75pF N750 caps were added in parallel with C62 on the bottom of the board.

VFO calibration was performed from 10.100 MHz to 10.145 MHz (rather to 10.150 -- the low end of the tuning cap is very nonlinear).

VFO tracking: Output frequency now agrees to within +/- 0.5 kHz with the dial markings over the calibration range.

Drift: Initial warm-up drift is now minus 150 to 200 Hz over the first 15 minutes from a "cold start". Long term drift over many hours is less than 100 Hz/hour (typically no more than 50 Hz/hr), even when room temperature varies by a degree or two. I believe that most of the initial warm-up drift is caused by the NE602. (I swapped NE602's; this required slight VFO recalibration, but did not seem to change the drift significantly.)

Your results may vary...

OK chuck, so I'm a perfectionist -- have been all my life and I'm too old and stubborn to change! But I like to know where I'm transmitting to within a kHz or so, and don't like to drift out of the other guys receive passband during a QSO. My Explorer II now fulfills these requirements.

72, Larry W1HUE/7

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Subject: [4156] Pre-Summer Announcement  
Message-ID: <199602120702.HAA07444@chuck.dallas.sgi.com>

Gang,

For this summer it is recommended that you do two things.

1. Be sure to get your qrp-1 number.
2. Get something that will do less than 5W on 30M.
3. Be sure to get your qrp-1 number.

See previous archives on how to do this or go back  
and look at the welcome message for qrp-1.

Another propagation study in the works. Everyone  
starts at ground zero.

dit dit

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: N5EM@aol.com  
Subject: [4207] RS12 Update  
Message-ID: <960212191347\_142414198@emout07.mail.aol.com>

In a message dated 96-02-12 17:46:57 EST, you write:

>\* RS-12 NEWS \*

>=====

>The Russian RS-12 Amateur Radio communications satellite has been in Mode  
>KT since 02-Feb-96. Mode KT takes an uplink on 15 meters and downlinks it  
>on BOTH the 10 meter and 2 meter bands. Before this change, RS-12 was in  
>Mode K, and the only downlink was on 15 meters.

>

>The 2-meter downlink is strong, and allows better communications performance  
>for groundstations who experience difficulties in operating full-duplex on  
>the 10 and 15 meter HF bands.

>

>[Info via Oscar, DJ0MY]

>

>

More details on the mode switch.

Ed

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996

From: RobCap@aol.com

Subject: [4167] RT0 Electronics: Info

Message-ID: <960212100909\_220056976@mail06.mail.aol.com>

Quite a few people have asked me about RT0 Electronics, the people who restored my Heath HW-9. I was very pleased with their work and their service. The radio was brought up to spec. I believe the technician at RT0 was a former Heathkit employee, who worked for many years as a Heath Technician.

Address:

RT0 Electronics

5585 Hochberger

Eau Claire, MI 49111 (Yes Eau Claire, MI, not Wisconsin)

Telephone:

616-461-3057

Prices to restore equipment: (Parts and shipping are extra)

HW7: \$65

HW8: \$65

HW9: \$98

Their price list indicates that RT0 reconditions over 80 models of Heathkits, so I would be very surprised if there was something that RT0 could not fix.

73,

Rob, WA3ULH

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996

From: "Lau, Zack, KH6CP" <z1au@arrl.org>

Subject: [4166] Soldering

Message-ID: <311F58F7@arrl.org>



Chuck Adams K5FO wrote:

>Be sure to use, for kits, a soldering iron of 25W  
>or less. I hope that noone is trying to use 40W  
>or more. Heat stress on parts can cause some major  
>problems.

I would rather use a 60 watt temperature controlled iron than your typical 25 watt iron. If you set the iron to 700 degrees you will find it really tough to remove the traces, even on purpose. But, they come off pretty easily with the iron set to 800/850 degrees.

With a 60 watt iron I can quickly solder in most parts, resulting in minimal heat stress to the parts. With the temperature control, I don't have to carefully time the rate at which I solder in parts. I think a lot of people lift traces after letting their soldering iron sit around for a long time so it gets real hot...

Zack KH6CP/1

I must be getting old--I can't remember how many radios I've built. :-)

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: WJ4PRandy@aol.com  
Subject: [4170] soldering  
Message-ID: <960212105147\_142036183@emout06.mail.aol.com>

I second Zack Lau's remarks on soldering. The idea is to get on and off the connection in the least amount of time and the low wattage irons force you to camp out on the connection too long... negating the reason your using the low wattage iron in the first place.

Randy, WJ4P

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Greg Nunn <gnunn01@mail.coin.missouri.edu>  
Subject: [4180] soldering

Message-ID: <Pine.SOL.3.91.960212105726.20372A-100000@coinc0>

Regarding soldering heat sensitive components:

I may be more paranoid than most, but I use a heat sink. Radio Shack has a bag of alligator clips for about a buck. Just clip one to the lead on the component side of the board while soldering. That is, the clip goes between the end of the lead to be soldered and the (heat sensitive) component. The alligator clip will absorb some of the heat and buy you a little time before frying that tiny diode (or whatever).

Greg AA0XZ

Greg Nunn  
1701 Halsted Ct.  
Columbia, Mo 65203  
gnunn01@mail.coin.missouri.edu

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996  
From: "Robert J. Gobrick" <rgobrick@nfld.com>  
Subject: [4205] Soldering, Kit Building Etc (LONG)  
Message-ID: <2.2.32.19960211232522.00745d28@public.compusult.nf.ca>

QRP-L Gang (and Chuck and Zack),

Actually on the matter of what wattage size soldering iron to use for building I have to agree with both Chuck and Zack (boy I must sound like I'm running for the Iowa Republican caucus). Actually let me explain. Back in January 1995 Dennis Marandos, K1LGQ, the esteemed editor of the New England QRP Club "72" newsletter published an article I wrote on building the NN1G SWL30 rig. In that article I spent a bit of time talking about my "tricks" of the trade in building that I learned through the years from my Elmers (and yes there are some of you out there..)

My article was one of a number of articles on building written by fellow club members (Joe Everhart N2CX being a big contributor) for the "72" newsletter. Since the QRP ARCI QRP Quarterly doesn't typically reprint other club newsletter articles (something the QST National Contest Journal NCJ does) I thought I'd drop this article on the qrp-l list here and any qrp club etc that wants to use the article please do so. If Steve N8HCS thinks it's worthy maybe it will be archived on the QRP-L WWW homepage.

Anyway here's the article (refreshened a little) that I wrote a year ago.

Hope it is thought- provoking and I (we) would be glad to hear of Your building experiences (like Chuck and Zack).

73/72 Bob V01DRB/WA6ERB

PS: The article uses some Canadian "English" to increase the Newfoundland "content".

----- START -----

The Small Wonder Lab Transceiver - A Good Way To Learn How to Build a Kit

by Bob Gobrick V01DRB/WA6ERB  
email bgobrick@nlnet.nf.ca

Do you want to put some fun back into your ham life? If so, then consider building the new Small Wonder Lab (SWL) transceiver kit. The SWL is an unbelievable performance-to-price ratio value for a "first-time" kit builder or an experienced builder who wants to build a little rig with that something "special". It's even lots of fun to build. What's even more fun is operating the SWL rigs. I revelled in the thrill of having my SWL30 (30 meter kit) push a 1 watt plus cw signal into my longwire and working up and down the East Coast and a nice QSO with Yugoslavia.

You can read all about the design of this QRP cw superhet receiver based rig in the November 1994 issue of QST. Dave Benson, NN1G along with the New England QRP Club, originally designed this great little rig as a club project. Kits are available for 80, 40 or 30 meters. Rather than talk about the design, I'd like to talk about how much fun it is to build the SWL30. The SWL instruction manual gives some great building tips. I'll supplement those tips with some of my own and also let you know what "tools" I used to build this fun kit.

The "Kit" :

At a price of \$50 (US), you may wonder what you get in the way of components for that little money. You actually get quite a bit - resistors, capacitors, transistors, Integrated Circuits (IC's), crystals, toroids, wire for the toroids and a component masked printed circuit (PC) board. The PC board is a single side board which is a good board for a simple transceiver. I have recently built some "bigger" kits using pc boards with double sided and plated through holes and believe me, it is easier working with the

SWL single sided board. Double sided pc boards offer a number of design advantages but soldering double sided boards with plated through holes requires some additional soldering skills.

With a single sided board you "sense" when you have enough solder on a joint by watching when the solder "blob" begins to "grow". As you gain soldering experience you intuitively know when to stop adding solder by visually seeing the solder joint form. On a double sided board, with plated through holes, as you add solder to the joint the solder gets sucked up and disappears through the plated hole. It is not as easy to know when to stop soldering when plated through holes are involved. After your first couple of soldering connections, you proceed to check how much solder actually coated the opposite side of the board, since that is where some of the solder goes. With time you also learn how much solder is enough. That's why single sided boards are easier to work with.

The "component side" of the board is component masked to show where the parts go. The SWL instructions also have a nice 3-D like parts layout schematic. By holding the pc board up to the light, you can easily identify all the part locations against the schematic. Knowing the parts location greatly enhances the "parts stuffing" of this petite 2.8" X 4" size board.

My standard procedure for stuffing boards is to assemble the "low profile" components first, like the resistors, disc capacitors and diodes and then start building "upwards" with the crystals, coils, electrolytic caps and finally the transistors and IC's. Others do it differently - probably doesn't matter - but I always find it easier putting the low profile parts in first rather than trying to wedge those small capacitors in between coils and crystals later.

Some parts placement tips: 1. "Dress" resistors so the colour code goes from left to right matching the parts layout schematic. When resistors are mounted vertically the colour code should be on top. 2. Mount capacitors so the value can be read from the "front" or one "side" of the pc board. 3. Mount diodes so the value can be read from the top of the board. I think you get the idea - this always helps me when I troubleshoot a board (you notice that I said "I", since real builders always build the unit correctly the first time and never have to troubleshoot - hi). I may date myself here, but when I was in vocational high school, my instructor (a ham) taught us the old "mil spec" way of mounting components with the colour coded end of the component towards the "higher" voltage potential leg of the circuit (you notice I didn't say words like tubes or B+ voltage etc). Finally, admire (and inspect) your work when you're done soldering and before you start testing - it may never look this good again - hi.

Some other PC board building tips: 1. Buff the board prior to working on it with a plastic scouring pad. Buffing helps to clean off any residue chemicals that may remain after the board etching process. 2. When winding toroids with a given length of wire, "kink" the wire in the middle and proceed to wind half of the coil. When complete with that portion, wind the other half. I find this an easy way to properly "space" the windings so I end up with the "magic" 30 percent of the coil free of windings. 3. Finally buy a spray can of rosin flux remover and give the solder side of your board a shot of this when you are done. It makes for a "pro" finish and keeps crud from growing on your board when you operate on your next tropical QRP expedition.

#### The "Soldering Room":

My last couple of kit projects where done away from my home shop. A job assignment meant a relocation to an apartment. One of the bedrooms was designated a "soldering room" (as my wife calls it) and after furnishing the room with a sturdy folding table, I had selectively determine what tools I would bring to my new ham shack-soldering room. My list of tools is not priced at the low end, but then again it is not the expensive lab quality stuff either. I made a decision to get some "decent" tools for my kit building experience. Here is my minimum list of soldering tools and aids.

The "Light" - You need good light when soldering those tiny components (remember what your Mother preached). I purchased one of those swing-arm magnifying lamps that was side mounted on the work table. When I'm soldering or inspecting the pc board I am able to swing the magnifying glass right over my work. This is important to see "up close" any soldering bridges (I never get those) or components mounted incorrectly (never a problem). My lamp uses a 60 watt light bulb but one of these days I'm going to treat myself to one of those nice circular florescent units and really be cool.

The "Printed Circuit Board Holder" - For years I had a PanaVise circuit board holder stand that was purchased used at a ham flea market. It finally broke one day and I struggled for months without it. I could never figure out how a kit builder could live without a pc board holder. The PanaVise wasn't perfect and I wasn't interested in spending big bucks for a new unit. I finally came across a printed circuit board holder that answered my needs. Before I describe it though, I must say that you may have trouble finding this pc board holder. The unit is sold under the Weller name and is made by the parent company - CooperTools of Germany.

I purchased my unit from Action Electronics Distributer in Montreal, but from what I can tell it is not available in the United States. If you can find it - buy it - it's a great unit.

A picture would give a better description, but basically it looks like two triangular "bookends" that ride on two bottom rails . The board is placed in guides at the apex of each "bookend" and you adjust the "length" by moving the "bookends" closer or farther apart. There is a knob at the apex that lets you flip the board upside down to mount the components on one side and then flip over to solder. Finally it has a little "space shuttle" like articulated arm on the component side that swings a foam pad over the component to hold the component in place. The parts now don't fall out when the board is upside down - ingenious!

OK, if you are really stuck and you're tired of doing your pc board soldering on an old towel there is one trick I just heard of recently. If your pc board has corner holes for mounting, temporarily mount 4 long screws with nuts and make long "feet" for the board. Now you can flip the board upside down and solder with the board elevated. By the way how many NorCal 40 builders knew that you had a built-in pc board holder by attaching the front and back panels to the pc board mounted components which were first mounted on the board?

The "Tools" - The tools you use to construct with are important. For years I used those "only used once" wire cutters etc. that they always seem to sell at ham flea markets. They probably were only used once cutting prison chains and that is the reason they peddle them at flea markets. I was never satisfied with the quality of these type tools so I went out and bought tools used by the professionals. Even though the price may be higher than the flea market specials you get what you pay for. Pick some good brands like Diamond/Xcelite and you will have tools that will last forever and are a joy to work with.

The "Soldering Station" - When I first started building I had a whole collection of different soldering irons (and a soldering gun). Most of these were used and then abandoned because they were too big, too small, too hot, not hot enough, etc. I've done it all with these irons - lifted pc lands right off the board with too much heat, had cold soldering joints, created soldering bridges because of too big a tip - on and on. Recently I was helping a ham solder leads to one of those tiny DIN connectors for his TNC. When he brought out his iron I almost went home - I think his kids must have used it for some wood burning craft project. It was miserable to work with. A soldering station is one of the most important purchases for kit builders. Even if you are not a kit builder you

will never regret the purchase of a good soldering station the next time you need to solder some DIN and new mini-DIN connectors.

My first soldering station (and still my favourite) was a Weller WTCPR soldering station that I bought used at a hamfest. It consisted of a 24 volt power unit which held the spring soldering iron stand and cleaning sponge. The iron portion was a fixed temperature type and the temperature was determined by the tip that you used - 600, 700 or 800 degrees F. My unit came with a 700 degree screwdriver tip. These stations can be purchased used for decent prices and even if the tip looks worn, replacement tips are readily available.

There is lots of discussion about what wattage the iron should have. What is important is not the wattage, but the temperature at the tip and how fast the tip responds to maintaining that temperature when your heating a joint. Solder melts at less than 400 degrees F. You need about 500 degrees for the solder to form the intermetallic bond with the leads and PC board land. And finally you have about 100 degree gradient between the iron and the soldered joint. Thus you need an iron with a minimum working temperature of approximately 600 degrees and an iron that will maintain that temperature from start to finish. It's one reason why a "hotter" temperature tip (700 degrees F) helps when you are soldering a component on to a pc ground "land" - that "land" acts like a heat sink and will draw the heat away from the solder joint.

A good soldering station iron, such as the Weller, Ungar, OK Industries brands will give you that. If you are able to obtain an Ungar soldering equipment catalog it makes for some interesting and informative reading.

My second soldering station was one I picked up at Dayton this past year. It is an imported brand carried by C&S Sales of Illinois and it features a digital display and an adjustable temperature from 300 to 900 degrees. It's a nice unit but I have yet to find a "screwdriver" type tip for it. It comes with a conical type tip (like a pencil point) and although some people prefer that (Doug DeMaw W1FB article in Oct 94 CQ) I like the small screwdriver or chisel type point. I like to "wedge" the tip between the component lead and pc land to get good heat to both parts. I always find the conical tip "skidding" around the joint. By the way the C&S Sales soldering station had a special Dayton price of \$75.

Soldering tips: Follow the advice of cleaning your tip with a wet sponge before you solder and always try to tin the tip, by applying solder, before you return the iron to the stand. The "enemy" of a tip is letting it's surface heat away without the protection of a "wetted" tinned surface.

I am a big fan of desoldering braid. It is a little tricky to use at times and you have to minimize overheating the area that you want to remove solder from, but I find desoldering braid a lot more effective than those inexpensive desoldering hand pumps. A little hint - if you want to get the braid to work on a difficult joint pre-wet the joint with some solder before putting the braid to it. I usually keep a couple rolls of different sizes available when I'm doing a project, but you know, I hardly ever use the stuff (right...). By the way, forget about trying to desolder IC's with desoldering braid. My advice is to cut off every leg at the IC and desolder and remove the left over leg stubs. I always seem to ruin the PC land when I try to "save" the chip by desoldering the whole thing. Unless you have one of those expensive desoldering vacuum pump stations, it's not worth it - it's a lot easier (and cheaper) buying a new chip. A damaged pc board is the pits - you'll never trust it again.

So those are some of my "tricks of the trade" in building the SWL30. I take NO credit for any of these tips - these tips came from Elmers that I've read in 72 and elsewhere in the QRP Quarterly, SPRAT, QRPp, etc. My experiences come from reading about other's experiences and then trying it out myself. I just wish I started reading earlier in my kit building career, it probably would have made all my projects work better and it would have prevented me from burning my fingers every time I would hold a component lead in place while soldering - ouch!

The main thing is to enjoy the SWL 30 kit building experience and to take pride in showing off your MBM (Made By Me) project at your next ham club meeting.

Bob Gobrick - V01DRB/WA6ERB/VE2DRB - Newfoundland, Canada
QRPer Galore - ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP
Internet: rgobrick@nfld.com
bgobrick@nlnet.nf.ca
Compuserve: 70466.1405@compuserve.com

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Clark Savage Turner WA3JPG <turner@safety.ICS.UCI.EDU>  
Subject: [4153] Ten Tec 515 power supply?  
Message-ID: <1156.824105087@safety.ics.uci.edu>

Anyone know if Ten Tec ever sold a matching power supply for the



Argonaut 515, black and all? I know that the 405 amplifier was not redone for the 515. I wondered if there were more matching accessories than the audio CW filter and the crystal calibrator, which I have seen. Also, anyone know the years the 515 was manufactured? I can check ham magazines for advertising to see what was offered.

Still working on the classic Argonaut information. Anything you have on modes / or other info about the Argonaut 515, 509 or 515 are welcome.

Clark  
WA3JPG

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: WOHEP@aol.com  
Subject: [4185] Tnx for Kanga address  
Message-ID: <960212131239\_319831540@emout05.mail.aol.com>

Tnx for the quick replies with the Kanga US E-mail address.

Rich WOHEP

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: kreinbd@ccgate.dl.nec.com (David Kreinberg)  
Subject: [4174] VERTICAL MADNESS  
Message-ID: <9601128241.AA824149669@smtpgw.ccgate.dl.nec.com>

Folks:

All the recent talk here about verticals got me motivated. Took advantage of the lovely, warm wx last weekend to build a home brew vertical for 20m.

Have it cut for the middle of 20m CW area, however, with my tuner it covers entire 20m band with no more than 1.5:1 SWR, or so. I'm very pleased with its performance, worked entire N,E,S,W USA and a XE with 3 watts on my MFJ-9020. Hope to work some DX stations soon.

Here's something interesting - I can tune this vertical on 40m with less than 2:1 SWR!! I find this interesting,

as I expected this to be a monobander. I do have (what I think) is a good ground system for the vertical. I have about 20 16' radials attached and plan to add more soon (I ran out of wire!!). The antenna itself is ground mounted I didn't work anybody yet with this on 40m, but I will try this week.

Can anybody explain if this critter should be effective on 40 (for some DX fun)?? Is this effectively an 1/8 wave ant for 40m??

Will let you know how she does on 20m DX.

72/73 de Dave KK5HA

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996  
From: phil.heaton@wa4bro.atl.ga.us (PHIL HEATON)  
Subject: [4208] WA3NNA/B  
Message-ID: <8BAA455.01FA001B1E.uuout@wa4bro.atl.ga.us>

Well I copied the beacon at all the power levels, but did not copy the code word for 200uW. I had just got up Saturday morn and was sniffing around when I came by it. It shifted from 200uW to 2W at about the time I found it. I copied all the other power levels and code words pretty well. At around 08:45 EST the 2W was down to S3 or S5 whereas at 08:00EST, it was at S9+10dB. I copied the 20mW signal about as strong as I did the earlier 200uW signal. IF I HAD ONLY GOT UP EARLIER! Maybe next time! Thanks for the fun with the beacon.

73 de Phil, KE4KRT

P.S. Rig is TS850 and ant is 160m dipole fed with 450 ohm line via a balanced coupler.

```
+-----+
|      Phil Heaton, KE4KRT      |
|      Phil.Heaton@SID.Net      |
|                                |
| You can whine and complain till you're |
| green as a toad, but if you want on HF |
|      you've gotta learn the code!      |
+-----+
```

\_\_\_ Blue Wave/QWK v2.20

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: femens@iquest.com  
Subject: [4181] Wilderness kits  
Message-ID: <199602121718.LAA01197@vespucci.iquest.com>

Can someone tell me where on the web I can find info on the Wilderness Radio kit (or kits)? I need a brief description, prices and who/where to order from.

I got dragooned into giving a brief pitch on the qrp possibilities for a dx club tomorrow night and would like to have the info available.

Frank Emens, Huntsville Alabama "femens@iquest.com"  
"Things are more like they are now than they have ever been before."

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Jeff Gold <JMG@tntech.edu>  
Subject: [4184] World Radio  
Message-ID: <01I14I3SKWAWHV2HT8@tntech.edu>

Hi,

anyone get World Radio? Trying to find out whether they reprinted an article I wrote recently on the Gary Breed kit.

73

Jeff, AC4HF

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Wayne Barnhart <wayneb@on-ramp.ior.com>  
Subject: [4151] xtals  
Message-ID: <Pine.LNX.3.91.960211213435.16715B-100000@on-ramp.ior.com>

Thanks for those who responded to my xtal question, now I know what I can't do.

I also am in the process of building an NW8020 and mine is for 20 meters. So far only had time to do the VFO and KEY circuit but plodden along. I concur with the other post doing the 40 meter version (sri didnt get your name). The kit is well put together. I hate to say this but for the benefit of others watching this thread the instructions do cover the markings on the capacitors quite well. The circuit board sucks up the solder nicely. I had forgotten how much fun this can be...been a long time since Heathkit.

There is a ton of filtering in this rcvr and I am anxious to get to the other builders point and check out the rcvr for myself. I be thinking it must be quite selective. The other party (which I had noted your name, sorry) mentioned that he heard signals I was wondering how sharp they were.

My one dissapointment is that I wish there was something on the theory of operation for the radio. For instance, the RF is coming out of a 602 and goes through a 4 pole xtal filter, briefly amplified by a fet then is fed into a MC1350. I have no idea what that is but it is feeding directly into another 602 before going into an audio preamp. Most interesting.

Wayne WB7WHI  
Spokane, Wa.

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Larry East <LVE1@inel.gov>  
Subject: [4171] RE: 40 METER BEACON  
Message-ID: <2.2.16.19960212154410.2277a612@garnet.inel.gov>

Not to dump cold water on anyone's experiment, but WHY was 7.021 picked as a "beacon" frequency? This is in a fairly busy part of the band, particularly for DX. About 1 minute before the beacon came on Saturday afternoon, an LU2 was calling CQ about 100 Hz lower. A few minutes after the beacon came on, an XE2 was in QSO with a W9; 10 or 15 minutes later, there were at least three QSO's going on within +/- 250 Hz of the "beacon frequency". Oh yes, for what's its worth, I heard it out here in Idaho at 0000 at about S-4 at the 2000mW level. The next level (200mW, I believe) was just above the noise at S-1.

72, Larry W1HUE/7

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: burdick@interval.com (Wayne Burdick)  
Subject: [4198] Re: 40-9er varactor diode tuning?

Message-ID: <v0213050fad45631d4ed9@[199.170.106.28]>

Ted,

>....use a varactor to tune the VX0?

No, and it may be difficult. You'd need a very wide-range varactor diode with a low minimum capacitance (say, 5-60pF) and high Q at 7MHz (>200). That would at the very least require a wide tuning voltage range, whereas the 40-9er uses a regulated 5V supply. If you find such a beast let me know.

The air trimmer is cheap, and keeps Q high and min. capacitance low. Without the latter you won't get much VX0 range. You can use a high-Q toroid with a lot of turns instead of the RF choke to increase range. Whatever you use, check your power output over the full range of the trimmer, since it will vary considerably and possibly stop. (By the way, a separate, high-power VX0 would give you more range than possible with the '602, but it would also add a lot of current drain.)

>Do something similar for next year's Colorburst Sprint?

Too far in advance. I work best with < 1 mo. lead time :)

Wayne  
N6KR

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: cooper@gmpvt.com (Tom Cooper)  
Subject: [4161] Re: 49er Case - What size is a Altroids  
Message-ID: <199602121328.IAA09058@web.gmpvt.com>

Altroids are "curiously strong" peppermints from England. They come in a metal box, about 4"X 2 1/2" X 1", with a folding lid on the top. Very handy.

Do the 49er and a 9V battery both fit? If so, I've got to have one!

Tom WA1GUV

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: "Robles Rodriguez, Pablo" <S927153@SARK.UPR.CLU.EDU>  
Subject: [4160] Re: Bingo!! 579 to Hawaii - 2 watts!  
Message-ID: <6A4A7010B4F@sark.upr.clu.edu>

Roy

This things happen some times. It's the same as when told a friend QROer that i have worked Israel with only 4W. By the way I have the QSL to prove it and he knows I have a HW8 as my one and only radio. He laugh at me. Some people beleive low power means toy radios. I have never encountered a non beleiver on the air, but we are exposed to those kind of things. Better luck next time u find KH6. See Yaaaaa!

72 es GL!  
Pablo  
WP4JXD

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Steve Greene <sgreene@washsq.com>  
Subject: [4196] Re: Drake Mods  
Message-ID: <Pine.LNX.3.91.960212154908.10661A-100000@mercury.washsq.com>

On Mon, 12 Feb 1996, Thom LaCosta wrote:

>  
> Hello All!  
> I have a Drake t4xB...obviously too powerful to joing you all. Does  
> anyone know of any mods that would allow me to get the power down to the  
> QRP levels, without doing things like taking out the finals? (g).

I have a T4XB/R4B, too!

For CW, here's what I do: tune it up as normal (into a dummy load), then use the drive control to drop down the power. You'll have to adjust the VOX sensitivity to get the relay to key.

I \*think\* the same approach would work for SSB as well, but haven't tried it.

> I was thinking of taking the output of the driver tube and running it out to  
> a connector....but then I'd have to build a pi-network or something like that.

You could possibly just pull the finals and run a shielded cable directly  
into the PI network - though I'm not sure how you'd adjust it. Any  
suggestions from the group?

Steve Greene  
KA1LM  
sgreene@access.digex.net ka1lm@amsat.org

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: PA3ASC@bonny.hol.nl (Mike Perry)  
Subject: [4199] Re: Grid squares calculation method (3 screenfulls)  
Message-ID: <199602122152.WAA31070@bonny.hol.nl>

--=====824192883==\_  
Content-Type: text/plain; charset="us-ascii"

>From: Brad Mugleston <bmug@gwl.com>  
>Date: Mon, 12 Feb 1996 10:01:56 EST

>I need some help. I can calculate my grid  
> square for the first four characters but I am  
>lacking the math for the last two.  
>Any help? 72, Brad

Hi Brad and Gang,  
All you need is a hand calculator.  
The method follows:

--=====824192883==\_  
Content-Type: text/plain; charset="us-ascii"

-----  
IARU 'MAIDENHEAD' QTH LOCATOR.

-----  
The IARU locator code is made up of  
two, four or six symbols, depending  
on the resolution needed. A four-symbol  
code has a resolution of one degree of  
latitude and two degrees of longitude.

One degree is equivalent to 111 km (70 miles) at the equator. A six symbol locator improves resolution by a factor of 24 (e.g. 4.6 x 9.2 km) at the equator. Due to the curvature of the Earth, the resolution in longitude becomes sharper by moving away from the equator.

Full details of this system, and some handy programs as well, are given in a booklet available from:

Folke Rosvall, SM5AGM, Box 8037,  
S-19108 SOLLENTUNA, Sweden.

(My copy cost six IRCs two years ago, but better check for latest info.)

To find the coordinates of your QTH you will need an atlas or a topographical map. For towns and cities in the USA, this info may still be obtainable (in millionths of a degree) from:

<http://tiger.census.gov/places.html>.

The unzipped ascii file needs more than 3 MB of disk space!

A locator can be computed using the method illustrated below. Consider a hypothetical position at  
75degs 36min 42sec West,  
38degs 19min 31sec North.

1. Convert the coordinates to decimals of a degree, assigning minus signs to West and South angles:

Long -75.6117 = X, Lat 38.3253 = Y.

2. Take longitude X and compute:

$A = (X/20)+9 = 5.21942$

$B = \text{INT}(A) = 5$

$C = (A-B)*10 = 2.1942$

$D = \text{INT}(C) = 2$

$E = \text{INT}((C-D)*24) = 4$

3. Take latitude Y and compute:

$F = (Y/10)+9 = 12.83253$

$G = \text{INT}(F) = 12$

$H = (F-G)*10 = 8.3253$

$J = \text{INT}(H) = 8$



K = INT((H-J)\*24) = 7

4. Construct the locator code,  
taking longitude before latitude  
for each pair of symbols:  
(B+1)th letter of the alphabet = F  
(G+1)th letter of the alphabet = M  
D as an integer = 2  
J as an integer = 8  
(E+1)th letter of the alphabet = e  
(K+1)th letter of the alphabet = h  
Answer = FM28eh.

GL es 73  
de Mike Perry, PA3ASC  
End=====

--===== \_824192883==\_  
Content-Type: text/plain; charset="us-ascii"

--  
Regards,  
Mike Perry. [e-mail :- PA3ASC@mailbox.hol.nl ]  
=====

--===== \_824192883==\_--

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: [4210] Re: Jim Cates' Phone Number  
Message-ID: <Pine.LNX.3.91.960212174943.3429A-100000@dt1.datatamers.com>

Keven,  
Jim's phone No. is: (916) 487-3580  
72, Dave, W6EMD  
-----

On Mon, 12 Feb 1996 KFGlynn@aol.com wrote:

> Hello everyone,  
>  
> Does anyone have Jim's phone number?  
>  
> Tnx es 73 de Kevin KB2TE0  
>

>

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: herr@ridgecrest.ca.us (Michael Herr)  
Subject: [4162] RE:mode KT  
Message-ID: <v01530501ad4578ff65b8@[199.120.150.49]>

ED, N5EM, told us about RS-12 is now in modeKT, ie 15m up, 10m and 2 m down. The passbands are: 21.210-21.250 up, 29.410-29.450 and 145.910-14.950 down.

The input for mode A RS10 is 145.860 - 145.900, just out side of the RS-12 output.

BUT, if RS-11 was activated, 145.910-145.950, hey we would have a dual hop! And, right now RS-10 and RS-12 are dancing together over the US. Imagine up on 15, across on 2m then down on 10...Blows the mind

vy 72 es 73  
Mike WA6ARA

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: aa7qy@primenet.com (Roger Hightower)  
Subject: [4154] Re: NorthWest QRP Sprint  
Message-ID: <199602120611.XAA09537@usr4.primenet.com>

At 10:57 PM 2/11/96 EST, Byron8LCZ@aol.com wrote:

>How did the rest of you do ?

>

>72, Byron WA8LCZ Detroit

>

>

I was only able to work the contest for about an hour due to honey-do's, but managed 6 contacts on 20. Nada on 15, and 40 was a mess here.

Russ, AA7QU had a boomer of a signal, and Paul, VE7CQK sounded quite well down here in the hot country.

Fun anyway, and nice to conact some of the listers.

72/73, de Roger AA7QY

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Subject: [4178] Re: OHR 30M Exp II VFO Tracking & Drift  
Message-ID: <199602121700.RAA08548@chuck.dallas.sgi.com>

Larry,

I too like to have zero drift and I don't think that I ever  
in my postings made any negative remarks in that regard.  
My apologies if I gave that impression. :-)

The NE602 is thermally temp compensated to a great degree, thus  
if any drift occurs it has to be outside of the NE602. The NE602  
is remarkable in this area. Wayne Burdick and others can give you  
a dissertation on how using this fact makes the NorCal series  
and the NN1G & OHR rigs very stable and drift free when NE602s  
are used and other parts are temp compensated outside.

There are those that continually downgrade the NE602, but in all  
the rigs that I have with the NE602 as a mixer have really done  
very well. I think for the price they are super. IMHO.

See you 30M.

dit dit

cc: to THE list

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Larry East <LVE1@inel.gov>  
Subject: [4187] Re: OHR 30M Exp II VFO Tracking & Drift  
Message-ID: <2.2.16.19960208183736.1bc744ae@garnet.inel.gov>

At 17:00 2/12/96 GMT, you wrote:

>Larry,

>

>I too like to have zero drift and I don't think that I ever  
>in my postings made any negative remarks in that regard.  
>My apologies if I gave that impression. :-)

>

I recall you made some comment to the effect that if a VFO drifts less than 300 Hz (or some figure around there), then better leave it alone (probably good advice, actually...). Well, I can't seem to leave things alone, and have definitely gotten myself into trouble because of that! :-)

>The NE602 is thermally temp compensated to a great degree, thus  
>if any drift occurs it has to be outside of the NE602. The NE602  
>is remarkable in this area. Wayne Burdick and others can give you  
>a dissertation on how using this fact makes the NorCal series  
>and the NN1G & OHR rigs very stable and drift free when NE602s  
>are used and other parts are temp compensated outside.  
>

Well, I can put my finger on the NE602 and watch the frequency drift down; I remove my finger, and it drifts back up (not all that much, but certainly measurable -- think it was less than 100 Hz, but failed to keep notes). Same with the inductor can, but it and the '602 are far enough apart that I don't think there could be any significant thermal coupling between the two except via the board. To get any noticable frequency change from any of the caps, etc., I have to put a soldering iron tip on 'em (burnt one cap screwing around this way...). Also, I don't see any frequency change associated with the RIT tuning diode, even when I heat it with an iron (was a little surprised at that...).

>There are those that continually downgrade the NE602, but in all  
>the rigs that I have with the NE602 as a mixer have really done  
>very well. I think for the price they are super. IMHO.  
>

Yep; can't beat 'em for the price!

72, Larry.

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: aa7qy@primenet.com (Roger Hightower)  
Subject: [4152] Re: R7 tuning help needed.  
Message-ID: <199602120604.XAA23988@usr2.primenet.com>

At 09:35 PM 2/11/96 EST, Paul Erickson wrote:

>I have borrowed an r7 from a friend for comparison purposes, and want to  
>have it as backup for the coming contest. The problem is that the swr is  
>fine for all bands except 20mtrs, where it appear electrically short in that  
>minimum swr occurs in the phone band. I don't have the manual to refer to  
>and don't want to mess things up for my friend. Looking at it, if I lengthen  
>the 20 meter section, I am assuming I will have to shorten the 30 and 40  
>meter sections to compensate.

>  
>Anyone have any comments?  
>  
>cheers, Paul  
>VE7CQK  
>email: paul1@wizard.ucs.sfu.ca

The R7 is tuned from 10 up, so retuning the 20M section will affect the 30 and 40M sections, but not by much. Wish I could give you some starting dimensions, but I loaned my R7 instructions and have not gotten them back.

Nice to have contacted you in the NW QRP test today.

73, de Roger, AA7QY

NorCal 1099   CoQRP 176   QRP-L 62   G-QRP 9081   ARCI 8946   NE-QRP 383

From qrp-l@lehigh.edu   Mon Feb 12 22:31:49 1996  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Subject: [4172] Re:   soldering  
Message-ID: <199602121615.QAA08396@chuck.dallas.sgi.com>

Ooops. I think that 25W does not fall into the low wattage class of soldering irons gang.

I agree that 15W is too small.

Another thing that factors in is if one wipes the tip of the iron across a wet sponge before going to the point to solder. I use a dry washcloth (not one that I'd put back in the bathroom :- ) ).

I think we all fall into our favorite ways of doing things and after having built kits for 35 years I found a series of things that I do that work for me everytime.

Little things like putting all the resistors and markings in the same direction. It's like spelling errors to me. :-)

I do one thing that people will really cringe at here on this group. I bend EVERY leg over flush with the board and I cut it at the edge of the soldering land. This gives me a very good physical fit but if you make a mistake you got some serious problems that could occur. I don't recommend this for even the serious builder. You can't ever get in a hurry

if you do this. Not ever.

dit dit

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Monte Stark <ku7y@sage.dri.edu>  
Subject: [4190] Re: Soldering  
Message-ID: <Pine.SUN.3.90.960212082053.1922C-1000000@vortex.sage.dri.edu>

Hi Zack and all,

Listen to what Zack is saying.....it can save you a lot of trouble.

When I took over the oversight of a group of people soldering boards by hand, one of the first things I did was replace the 600 deg tips with 700 deg tips. This cut the trace lifting rate by over 90%!

For those who could really solder, I went to 800 deg tips. But at 800 degs you can cause damage if you don't know what your are doing!

Some of the better Weller soldering irons have tips that are rated by temp. They are good irons.

I use a GC, (or is that CG?), iron that is set with a knob on the base. It's about \$50 and the little Wellers are up around \$100.

Do whatever you have to do to know your tip temp. Much below 700 degs and it takes so long to get the joint hot enough to melt the solder that the trace is getting too hot. At 800 degs the joint get hot very fast and you must get off before you get the trace too hot. 700 degs gives a little room for error but not much!

Have fun, cu1, (I can't remember how many radios I have fixed.  
Does that mean I'm getting old?)

73, Ron,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....

...ku7y@sage.dri.edu.....Sun Valley, Nevada....  
...QRP-L #17....ARRL....NorCal #330.....NRA LIFE.....

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996  
From: "L. B. Cebik" <cebik@utkux.utcc.utk.edu>  
Subject: [4200] Re: soldering  
Message-ID: <Pine.SOL.3.91.960212165017.1649A-1000000@utkux4.utcc.utk.edu>

On Mon, 12 Feb 1996 WJ4PRandy@aol.com wrote:

> I second Zack Lau's remarks on soldering. The idea is to  
> get on and off the connection in the least amount of time  
> and the low wattage irons force you to camp out on the  
> connection too long... negating the reason your using the  
> low wattage iron in the first place.

>

> Randy, WJ4P

The principle is exactly the same in cooking: for a given thickness of meat, use a high heat to sear the outside, but use a low heat longer to cook the meat throughout without burining the outside. Some cook steaks with a blowtorch for well-seared ultra-rare steak--for well done without cinderizing the meat, use a much lower heat. Hence, higher heat to solder quickly without cooking the component--within reason, of course.

-73-

LB, W4RNL

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Paul Christensen <PaulC@jax.se.continental.com>  
Subject: [4159] RE: Ten Tec 515 power supply?  
Message-ID: <311F50CD@se.continental.com>

>Anyone know if Ten Tec ever sold a matching power supply for the  
>Argonaut 515, black and all?

Clark:

Yes, I have a 515 with matching power supply, model 210. Other accessories for the 515:

206A - Xtal Calibrator

208A - CW Filter/Variable Notch Filter

215P/215C - Microphones

214/234 - Speech Processor  
247 - Antenna Tuner

I have an extra color sales brochure on 515 and accessories. Let me know, and I'll mail it to you.

-Paul, N9AZ

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: [4189] Re: Wilderness kits  
Message-ID: <Pine.LNX.3.91.960212105709.31874C-100000@dt1.datatamers.com>

Frank,  
Wilderness is not on the web yet, to the best of my knowledge. Contact Bob Dyer at (415) 494-3806.

Wilderness Radio  
P.O. Box 734  
Los Altos, CA 94023-0734

72, Dave, W6EMD

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: Steve.Hideg.1@nd.edu (Steve Hideg)  
Subject: [4195] Re: Wilderness kits  
Message-ID: <v02130515ad450a0c0289@[129.74.35.16]>

Try <http://qrp.cc.nd.edu/qrp-1/catalog/>

72

--Steve

>Can someone tell me where on the web I can find info on the Wilderness  
>Radio kit (or kits)? I need a brief description, prices and who/where  
>to order from.  
>  
>I got dragooned into giving a brief pitch on the qrp possibilities for  
>a dx club tomorrow night and would like to have the info available.  
>  
>Frank Emens, Huntsville Alabama "femens@iquest.com"  
>"Things are more like they are now than they have ever been before."



Office of Information Technologies      Telephone: (219) 631-3926  
University of Notre Dame                      URL: <http://www.nd.edu/~shideg/>

From qrp-l@lehigh.edu Mon Feb 12 22:31:49 1996  
From: bmitchel@kodak.com (Brad Mitchell)  
Subject: [4188] Re: World Radio  
Message-ID: <9602121852.AA14425@iiatasun.cba.Kodak.COM>

Hi,

anyone get World Radio? Trying to find out whether they reprinted an article I wrote recently on the Gary Breed kit.

73

Jeff, AC4HF

Is that the multi band, multi mode Gary Breed kit Jeff?

From qrp-1@lehigh.edu Mon Feb 12 22:31:49 1996  
From: aa7qy@primenet.com (Roger Hightower)  
Subject: [4191] Re: World Radio  
Message-ID: <199602121942.MAA27109@usr3.primenet.com>

At 01:00 PM 2/12/96 EST, Jeff Gold wrote:

>Hi,

 $\succ$ 

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>anyone get World Radio? Trying to find out whether they reprinted
>an article I wrote recently on the Gary Breed kit.
```

>

>73

>

>Jeff, AC4HF

>

Received the March 1996 issue today....the article isn't there.  
72, de Roger, AA7QY